

What is claimed is:

1. A wheel support bearing assembly for rotatably supporting an automotive wheel relative to a vehicle body structure, which assembly comprises an outer member having an outer periphery formed with a flange and also having an inner periphery formed with raceway surfaces; an inner member formed with raceway surfaces confronting the associated raceway surfaces in the outer member; double rows of rolling elements interposed between the raceway surfaces in the inner member and the raceway surfaces in the outer member, respectively; and a sealing unit for sealing opposite open ends of an annular bearing space delimited between the outer and inner members;

wherein the inner member includes a hub axle formed with one of the raceway surfaces and a wheel mounting flange; and

wherein the angle of fiber flow relative to at least one of the raceway surface in the hub axle and the raceway surfaces in the outer member is chosen to be equal to or smaller than 15° .

2. A wheel support bearing assembly for rotatably supporting an automotive wheel relative to a vehicle body structure, which assembly comprises an outer member having an inner periphery formed with raceway surfaces; an inner member formed with raceway surfaces confronting the associated raceway surfaces in the outer member; dual rows of rolling elements interposed between the raceway surfaces in the inner member and the raceway surfaces in the outer member, respectively; and a sealing unit for sealing opposite open ends of an annular bearing space delimited between the outer and inner members;

wherein the inner member includes a hub axle formed with one of the raceway surfaces and a wheel mounting flange; and

wherein the angle of fiber flow relative to the raceway surface in the hub axle is chosen to be equal to or smaller than 15° .

3. A wheel support bearing assembly for rotatably supporting an wheel relative to a vehicle body structure, which assembly comprises an outer member

having an outer periphery formed with a flange and also having an inner periphery formed with raceway surfaces; an inner member formed with raceway surfaces confronting the associated raceway surfaces in the outer member; dual rows of rolling elements interposed between the raceway surfaces in the inner member and the raceway surfaces in the outer member; and a sealing unit for sealing opposite open ends of an annular bearing space delimited between the outer and inner members;

wherein the angle of fiber flow relative to each of the raceway surfaces in the outer member is chosen to be equal to or smaller than 15°.

4. The wheel support bearing assembly as claimed in Claim 1, wherein the other of the raceway surfaces of the inner member is formed on an inner race segment that is mounted on an outer periphery of one end of the hub axle.

5. The wheel support bearing assembly as claimed in Claim 2, wherein the other of the raceway surfaces of the inner member is formed on an inner race segment that is mounted on an outer periphery of one end of the hub axle.

6. The wheel support bearing assembly as claimed in Claim 3, wherein the inner member includes two inner races having respective raceway surfaces confronting the raceway surfaces provided in the outer member.

7. The wheel support bearing assembly as claimed in Claim 1, wherein the hub axle is made of a bearing steel or a carburized steel or a carbon steel having a carbon content within the range of 0.4 to 0.8%.

8. The wheel support bearing assembly as claimed in Claim 2, wherein the hub axle is made of a bearing steel or a carburized steel or a carbon steel having a carbon content within the range of 0.4 to 0.8%.

9. The wheel support bearing assembly as claimed in Claim 1, wherein the outer member is made of a bearing steel or a carburized steel or a carbon steel having a carbon content within the range of 0.4 to 0.8%.

10. The wheel support bearing assembly as claimed in Claim 3, wherein the outer member is made of a bearing steel or a carburized steel or a carbon steel having a carbon content within the range of 0.4 to 0.8%.